PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application No.	:	10/657,650
Applicants	:	Larry J. Pacey et al.
Filed	:	September 8, 2003
Title	:	Gaming Machine Performing Real-Time 3D Rendering Of Gaming Events
TC/A.U.	:	3714
Examiner	:	Matthew D. Hoel
Docket No.	:	247079-000134USPT
Customer No.	:	70243

Mail Stop Appeals
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

APPEAL BRIEF PURSUANT TO 37 C.F.R. § 41.37

Dear Sir:

This Appeal Brief is filed pursuant to the Appellants' appeal to the Board of Patent Appeals and Interferences ("Board") from the final rejection of claims 30-50 in the July 9, 2009 Final Office Action. (Exhibit B). A telephone interview was conducted on June 26, 2009, but no agreement was reached between Applicant's representative and the Examiner. (Ex. C, Interview Summary). A Notice of Appeal was filed on October 9, 2009. The due date for this Appeal Brief is two months from the mailing date of the Notice of Appeal and this brief is being timely filed.

1. REAL PARTY IN INTEREST

The real party in interest of the above-captioned patent application is the Assignee, WMS Gaming, Inc.

2. RELATED APPEALS AND INTERFERENCES

There are no other appeals or interferences known to Appellant that will have a bearing on the Board's decision in an appeal of this matter.

3. STATUS OF THE CLAIMS

Claims 30-50 remain in the application. Claims 1-29 have been canceled previously.

4. STATUS OF AMENDMENTS

No amendments have been made subsequent to the last amendment filed on March 17, 2009.

5. SUMMARY OF CLAIMED SUBJECT MATTER

Aspects of the present inventive subject matter include, but are not limited to, methods and systems for but are not limited to, methods and systems for rendering three-dimensional displays of game features as shown in Figs. 1-3, 5, 7a-7b, 8a-8b and 9. Claim 30 generally relates to a method of operating a gaming system 10. *See* ¶ 7, Figs. 1-3, 5, 7a-7b, 8a-8b and 9, U.S. Publication No. 2004/0053686[1] (Exhibit A), Specification, p. 3, ll. 9-13). Simulation rule data 66 and physical object data 62 are stored. (Ex. A, ¶ 43, Fig. 2, Specification, p. 11, ll. 22-24). The physical object data 62 defines physical objects and the simulation rule data 66 defines rules of a simulated world that affect the physical objects. (Ex. A, ¶¶ 38, 40, Specification, p. 9, ll. 26-32, p. 10, ll. 15-26). The simulation rule data 62 and the physical object data 66 are selected to yield a pre-selected desired outcome probability distribution of a plurality of possible simulated outcomes. (Ex. A, ¶ 41, Specification, p. 10, l. 30 to p. 11, l. 5). A wager is accepted

[1] The Publication for the application at issue is being attached for convenience as Exhibit A. Applicant is also providing the corresponding specification page and line number in this and following sections.

to play a wagering game. (Ex. A, ¶ 28, Fig. 3, Specification, p. 6, ll. 10-13). Based on the interaction of the physical object data 62 and the simulation rule data 66, actions of the physical objects within the simulated world are simulated to randomly select a simulated outcome from the plurality of possible simulated outcomes according to the desired outcome probability distribution. (Ex. A, ¶¶ 29, 43, Fig. 3, Specification, p. 6, ll. 17-28, p. 11, ll. 24-29). The actions and the simulated outcome are graphically rendering such that the desired outcome probability distribution is readily apparent and discernible to a player of the wagering game. (Ex. A, ¶¶ 29-30, 43, 48, Figs. 3, and 7-9, Specification, p. 6, ll. 17-28, p. 7, ll. 4-8, p. 11, ll. 26-29, p. 13, ll. 17-21). An award is provided if the selected simulated outcome represents a winning condition. (Ex. A, ¶ 26, Fig. 3, Specification, p. 5, ll. 23-27).

Claim 40 generally relates to a gaming system 10 having a memory 30 for storing simulation rule data 66 and physical object data 62. (Ex. A, ¶ 43, Fig. 2, Specification, p. 11, ll. 22-24). The physical object data 62 defines physical objects and the simulation rule data 66 defines rules of a simulated world that affect the physical objects. (Ex. A, ¶¶ 38, 40, Specification, p. 9, ll. 26-32, p. 10, ll. 15-26). The simulation rule data 66 and the physical object data 62 are selected to yield a pre-selected desired outcome probability distribution of a plurality of possible simulated outcomes. (Ex. A, ¶ 41, Specification, p. 10, l. 30 to p. 11, l. 5). The game system 10 includes a wager input device 28 for receiving a wager to play a wagering game. (Ex. A, ¶ 25, Fig. 3, Specification, p. 5, ll. 7-9). The gaming system includes a display 18 and a controller 26. (Ex. A, ¶¶ 24-25, Fig. 2, Specification, p. 4, ll. 29-31, p. 5, ll. 5-13). The controller 26 is operative to simulate actions of the physical objects within the simulated world based on the interaction of the physical object data and the simulation rule data to randomly

select a simulated outcome from a plurality of possible simulated outcomes according to the desired outcome probability distribution. (Ex. A, ¶¶ 29, 41 Fig. 3, Specification, p. 6, l. 17 to p. 7, l. 3, p. 11, ll. 24-29). The controller 26 graphically renders the actions and the simulated outcome on the display 18 such that the desired outcome probability distribution is readily apparent and discernible to a player of the wagering game. (Ex. A, ¶¶ 29-30, 43, 48, Figs. 3, and 7-9, Specification, p. 6, ll. 17-28, p. 7, ll. 4-8, p. 11, ll. 26-29, p. 13, ll. 17-21). The controller 26 provides an award if the selected simulated outcome represents a winning condition. (Ex. A, ¶ 26, Fig. 3, Specification, p. 5, ll. 23-27).

6. GROUNDS FOR REJECTION TO BE REVIEWED ON APPEAL

I. Whether Claims 30-34, 38, 39, 40-44, 48 and 49 are improperly rejected under 35 U.S.C. 103(a) as obvious over U.S. Patent No. 5,380,007 ("Travis" attached as Exhibit D) in view of U.S. Patent No. 6,824,467 ("Schlottmann" attached as Exhibit E).

II. Whether claims 36, 37, 46 and 47 are improperly rejected under 35 U.S.C. 103(a) as obvious over Travis in view of Schlottmann and view of U.S. Patent No. 5,324,035 ("Morris" attached as Exhibit F)

III. Whether claims 35 and 45 are improperly rejected under 35 U.S.C. 103(a) as obvious over Travis in view of Schlottmann and Morris in view of U.S. Publication No. 2004/0015953 ("Vincent" attached as Exhibit G).

The July 9, 2009 Final Office Action rejected claims 30 and 40 based on Travis disclosing all of the limitations of claims 30 and 40 but "lacking specificity as to the simulation rule data and the physical object data being selected as to yield a pre-selected desired probability of a plurality of possible wagering outcomes." (Ex. B, p. 2). The Final Office Action noted that

Travis teaches a method of operating a gaming system including storing simulation rule data such as motion equations and physical object data such as ball locations. (Ex. B, pp. 2-3). The Final Office Action notes that Travis discloses simulating actions of physical objects within a simulated world to randomly select a simulated outcome such as bouncing balls drawn to form game outcome or combination of winning numbers. (Ex. B, p. 3). The Final Office Action asserts that the desired probability distribution is readily apparent and discernable since the eleven balls 48 in the four cylinders 42 in Fig. 1 have a one in eleven chance of being selected. (Ex. B, p. 3).

The Final Office Action notes that Schlottmann "teaches the simulation object data and the physical object data being selected to yield a pre-selected outcome probability distribution using a Monte Carlo test to determine the probability of each outcome, evaluating the distribution and altering the model as in Fig. 4 or defining the model, creating a list of allowed initial distribution, evaluating if the distribution of outcomes is satisfactory and altering the model. (Ex. B, pp. 3-4).

7. ARGUMENT

For the Board's convenience, claims 30-50 are one group that will stand or fall together. As will be explained, the Final Office Action fails to meet the burden to establish that the Travis and Shlottmann references in combination render obvious all of the elements of the independent claims 30 and 40. In fact, as will be explained, the combination of Travis and Schlottmann produce a three-dimensional model to produce a random outcome, but the method of determining the model running the simulation is by running the simulation and determining the probability

distribution, which is the **opposite** of the clams which design the model with a predetermined probability distribution outcome.

A. Claims 30-34, 38, 39, 40-44, 48 and 49 Were Improperly Rejected Under 35 U.S.C. 103(a) As Unpatentable Over Travis in View of Schlottmann

The Final Office Action explains the motivations to combine Travis and Schlottmann. (Ex. B, pp. 4-6). Applicant does not contest the propriety of combining the Travis and Schlottmann references, but Applicant maintains that the combination fails to anticipate all of the claim elements and therefore the pending claims are allowable under 35 U.S.C. 103(a).

1. The Shortcomings Of The Travis And Schlottmann Approaches

Travis discloses a video game apparatus including "simulated cylindrical housings that are filled with simulated numbered balls that are apparently mixed by a simulated upflowing stream of air through the cylinders." (Ex. D, Abstract). Although Travis displays simulated three dimensional objects such as the balls 48 in cylinders 42, the movement of the simulated objects (balls 48) does not determine any of the outcomes of the game. (Ex. D, Col. 4, ll. 3-33). The outcome in the Travis game is selected by a conventional random number generator and a player is awarded an award by correctly selecting the numbers generated by the random generator. (Ex. D, Col. 4, ll. 19-25). Travis thus does not use the physical object data and simulation rule data to randomly select a simulated outcome according to a predetermined probability distribution. Instead, Travis uses a conventional random number generator to determine the winning numbers. (Ex. D, Col. 7, ll. 24-35). The simulation is then used to simulate the action of the balls which then display to the player the resulting numbers determined by the random number generator. (Ex. D, Col. 7, ll. 64-68). Travis therefore creates the illusion

to the player that the interaction between three dimensional objects such as the balls 48 and the cylinders 48 generates a random outcome but the actual outcome is determined first and the process is simulated.

Schlottmann discloses a method of generating a random outcome based on the interaction of objects modeled for three-dimensional interactions. Schlottmann discloses creating a realistic physical model and then running a Monte Carlo test of the model to determine the probability distribution of the model's outcomes. (Ex. E, Col. 5, ll. 18-42, Col. 6, ll. 13-33). The discovered probability distribution is then used to construct a pay table. (Ex. E, Col. 6, l. 19 to Col. 7, l. 15, Fig. 4). Thus, Schlottmann does not disclose "the simulation rule data and the physical object data being selected to yield a pre-selected desired outcome probability distribution of a plurality of possible simulated outcomes." Also, Schlottmann discloses modeling a complex series of physical objects such as the slots and balls of a Pachinko board and therefore does not disclose the desired outcome probability distribution being readily apparent and discernible to a player of the wagering game since the probability of balls landing in various slots on the Pachinko board could not be ascertained readily by a player. (Ex. E, Col. 4, ll. 31-51, Fig. 3).

2. The Combination Of Travis And Schlottmann Does Not Disclose The Simulation Rule Data And The Physical Object Data Being Selected To Yield A Pre-Selected Desired Outcome Probability Distribution Of A Plurality Of Possible Simulated Outcomes

Claims 30 and 40 require that the simulation rule data and physical object data are selected to produce a pre-selected probability distribution. Travis does not disclose this selection because the data in Travis is only selected to model the movement of the physical objects such as

the balls. The actual probability distribution is produced by a conventional random number generator. (Ex. D, Col. 7, ll. 24-35).

The Final Office Action asserts that Schlottmann discloses this element either via Fig. 4 which is running a Monte Carlo test to determine the probability of each outcome or Fig. 6 which is an iterative process to adjust the model to eventually reach a desired probability distribution. (Ex. B, pp. 3-4, 10). Applicant respectfully submits that Schlottmann's method may provide the same result as that of the claim (3D modeling of objects to randomly generate an outcome) but the process for determining the probability distribution of the simulated objects differs significantly. Claims 30 and 40 require that the model based on the physical object data and simulation rule data are selected in order to achieve the desired probability distribution. Schlottman creates the model based on as realistic parameters as possible, but does not consider a pre-selected, desired probability distribution in selection of the parameters for the model. The Final Office Action concedes that either method in Schlottmann (Fig. 4 or Fig. 6) creates the three dimensional model first and then runs simulations based on that model to determine probability distribution. In contrast, claims 30 and 40 require that the parameters of the model (object data and simulation rule data) are selected to fit a predetermined probability distribution.

3. The Final Office Action Has Mischaracterized Schlottmann, The Model In Schlottmann Never Discloses A Pre-Determined Probability Distribution

The Final Office Action asserts that Schlottmann teaches "a predetermined probability distribution" citing the abstract. (Ex. B, p. 4). As explained above, this is inaccurate. The Abstract actually states that "creation of the list of outcomes and assignment of probabilities of occurrence **may be effected by a Monte Carlo test**." (Ex. E, emphasis added). Far from taking

a predetermined probability distribution, the Abstract of Schlottmann demonstrates that the model is created and then the probability is determined by running simulations, the opposite of the process in the claims.

The Final Office Action has asserted that it is not relying on the Monte Carlo disclosure in Schlottmann as a cross section of all possible results but for using object interactions to obtain random result presumably after at least an initial model formulation. (Ex. B, p. 14). Applicant contends that Schlottmann discloses using the Monte Carlo method as shown in Fig. 4 to determine the probability distribution **after** the modeling is completed to determine the probability distribution. For example, Col. 7, ll. 26-30 clearly discloses "At 51, **the developer defines the physical parameters of the model and then**, at 52, **runs a Monte Carlo test to determine the probability of occurrence of each of the possible outcomes**, using a random sampling of sets of starting conditions." (Ex. E, emphasis added). Another example is the technique to determine the pay table as described as:

> Accordingly, pay table development must be done using a Monte Carlo approach. In this approach, the game model randomly runs a large sample of games by randomly selecting a large number of sets of initial conditions (millions or more) and running them through the model, recording the outcome for each one. For example, the value of each parameter speed, angle and spin is randomly selected from its range (e.g. 0-65, 535) of possible values to arrive at a set of initial conditions, which is then run through the model, and the process is repeated.

Ex. E, Col. 6, ll. 13-28 (emphasis added). See also Col. 8, ll. 5-8.

4. The Same Result Relied On The Final Office Action Does Not Render The Claims Obvious

The Final Office Action has erroneously indicated that claims 30 and 40 are obvious because Schlottmann's methods may produce a three-dimensional model that yields that same probability distribution via multiple testing such as Monte Carlo as the predesigned models of

the present claims. The Final Office Action reasons that Schlottman "would have allowed one of ordinary skill in the art at the time of the invention to develop a physical model using an iterative process until an even one-on-eleven distribution was obtained for a column of lottery balls." (Ex. B, p. 4). This statement shows that the Schlottman cannot anticipate the elements of "the simulation rule data and the physical object data being selected to yield a pre-selected desired outcome probability distribution of a plurality of possible simulated outcomes" as the present claims select physical object data and simulation rule data once because such modeling factors are designed around a pre-selected probability distribution. Such a probability distribution must be iteratively arrived at using the Schlottmann method. The fact that both the Schlottmann method and that of claims 30 and 40 result in the same probability distribution does not mean that Schlottmann's different method anticipates the claims.

The Final Office Action also asserts that "it would have been obvious to one of ordinary skill in the art … to have applied the predetermined distribution of '467 to the game of" Travis. (Ex. B, p. 11). The Final Office Action proceeds on the erroneous assumption that Schlottmann discloses selection of its models on a predetermined probability distribution and proceeds to justify why it would be obvious to replace the random number generator in Travis with Schlottmann. (Ex. B, pp. 4-6, 12-13). The Final Office Action fails to state where Schlottmann discloses a predetermined probability outcome distribution because Schlottmann actually discloses the opposite method, namely formulating the physical object model and then determining the probability distribution.

5. Applicant Is Seeking Claims Only Over A Simulated Outcome Such That The Probability Distribution Is Readily Apparent And Discernible To A Player Of The Wagering Game

The Final Office Action has noted that during the June 26, 2009 interview, the Examiner noted that in order "for the claims to be allowable, they had to at least be drawn particularly to the roulette embodiment of the specification." (Ex. B, p. 13, Ex. C). Applicant contends, and the Examiner apparently agrees, that Schlottman's method is most appropriate for systems such as Pachinko where the outcome distribution from a system is not readily discernable to a player. Applicant is not attempting to cover such systems, rather the claims are directed toward a model where "the simulated outcome such that the desired outcome probability distribution is readily apparent and discernible to a player of the wagering game." (Claims 30 and 40). Applicant contends that such claims should not be solely limited to roulette, but should encompass all such systems where "the desired outcome probability distribution is readily apparent and discernible to a player." The Final Office Action fails to justify the limitation of allowability to a single embodiment. It is a fundamental axiom that it is improper to import claim limitations from the specification. *See e.g.* MPEP 211.01(II). Applicant is entitled to a broader scope of the claim language since the Travis/Schlottmann combination does not disclose all of the elements of the claims.

The Final Office Action asserts that "applicants wanted to get broader protection for the random result being a result of object interactions using the simulation rule data and the physical object data." (Ex. B, p. 14). The Final Office Action also erroneously asserts that Applicants are attempting to claim selecting physical object data and simulation rule data where probability distribution is not readily apparent to the player. (Ex. B, p. 15). The Final Office Action mischaracterizes applicant's position. Applicant contends that these elements in combination with "the simulated outcome such that the desired outcome probability distribution is readily

apparent and discernible to a player of the wagering game" are what are patentable as per these elements that are the claims. This specifically excludes more complex systems such as Schlottmann's Pachinko board.

B. Claims 36, 37, 46, and 47 are Improperly Rejected Under 35 U.S.C. 103(a) As Being Unpatentable Over Travis And Schlottmann In View Of Morris

Applicant respectfully submits that these claims depend from claims 30 or 40 and are allowable for the above mentioned reasons the base claims are allowable.

C. Claims 35 and 45 are Improperly rejected under 35 U.S.C. 103(a) as being unpatentable over Travis, Schlottmann and Morris in view of Vincent

Applicant respectfully submits that these claims depend from claims 30 or 40 and are allowable for the above mentioned reasons the base claims are allowable.

8. CLAIMS APPENDIX

A clean copy of the claims 30-50 involved in the appeal is included in the Claims Appendix.

9. EVIDENCE APPENDIX

A copy of the evidence relied upon by the appellant is included in the Evidence Appendix and is herein referenced. A list of evidence and where each was entered in the record is included in the Index to the Appendices.

10. RELATED PROCEEDINGS APPENDIX

As there are no related proceedings, no information is provided in the Related Proceedings Appendix.

11. CONCLUSION

For at least the foregoing reasons, the final rejection of appealed claims 30-50 set forth in the Final Office Action mailed July 9, 2009, should be reversed.

Respectfully submitted,

Date: December 7, 2009

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